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10/528,469	03/21/2005	David Dingwall	4292-101	4878

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EXAMINER	
REESE, DAVID C	

ART UNIT	PAPER NUMBER
3677	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,469	DINGWALL, DAVID	
	Examiner	Art Unit	
	David C. Reese	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-26 and 39-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 7-13, 19-20, and 31-43* is/are rejected.

7)☒ Claim(s) *14-18,21-26,29 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

THIS FINAL ACTION IS RESPONSIVE TO THE AMENDMENT FILED 6/19/2008.

- Claims 5-6 and 27-28 were canceled.
- Claims 1, 7-11, 14, 20-21, 25, and 39 were amended.
- Claims 1-4, 7-26, and 39-43 are pending.

Claim Objections

[1] Claim(s) 1, 7, 9-11, 14, and 20-21 were previously objected to because of informalities. Applicant has successfully addressed these issues in the amendment filed on 6/19/2008. Accordingly, the objection(s) to the claim(s) 1, 7, 9-11, 14, and 20-21 have been withdrawn.

Claim Rejections - 35 USC § 112

[2] Applicant has addressed all rejections under 35 USC § 112 to the Claims in the amendment filed 6/19/2008. Accordingly, the Examiner has withdrawn the 35 USC § 112 rejections.

Claim Rejections - 35 USC § 102

[3] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international

> application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[4] Claims 1-4, 7-13, 19-20, and 31-43 are rejected under 35 U.S.C. 102(e(1)) as anticipated by Pippins, US-6,757,995.

The shape and appearance of Pippins is identical in all material respects to that of the claimed design, *Hupp v. Siroflex of America Inc.*, 122 F.3d 1456, 43 USPQ2d 1887 (Fed. Cir. 1997).

As for Claim 1, Pippins discloses of an apparatus including:

a first component (30) defining a first passage;

a second component (42) connectable with the first component and defining a second passage, said passages being aligned when the components are connected to each other;

a rotatable locking pin (66) having formations (70) and a retaining element (38) having engaging formations (39, 40) complementary to said formations (70) and each configured for being accommodated in the aligned passages, the rotatable locking pin (66) being rotatable (see col. 6, line 5) relative to the components, in the aligned passages, the components between

a locked position (fig. 3) in which the formations (70) of the locking pin (66) engage at least one of the engaging formations (39, 40) of the retaining element (38) so as to prevent withdrawal of the locking pin from the aligned passages and to prevent separation of the components, and

a free position (39, 40 into the formations of 70, allowing the removal of both 38 and 66) in which the pin is slidably removable from the aligned passages to permit separation of the components,

wherein said formations (70) of the pin (66) at least partly disposed along circumference of the pin (66), and

wherein the pin (66) is configured so that said formations (70) interlock with the engaging formations (39, 40) of the retaining element (38) as the pin (66) is rotated (see col. 6, line 5) from the free position (39, 40 into the formations of 70, allowing the removal of both 38 and 66) to the locked position (fig. 3) to prevent separation of the first (30) and second (42) components.

Re: Claim 2, wherein the first component (30) and second (42) component are connected to each other, they can be separated by effecting relative movement of the components in opposite disengagement directions, and wherein interlocking the pin (66) with the retaining element (38) within the aligned first and second passages prevents the relative movement of the first and second in said opposite disengagement directions and also prevents separation of the first and second components (see fig. 3, prevents relative movement and separation of the first and second components).

Re: Claim 3, wherein the pin (66) when accommodated in the aligned passages, extends in a direction non-parallel to the disengagement directions.

Re: Claim 4, wherein the pin (66), when accommodated in the aligned passages, extends in a direction substantially perpendicular to said disengagement directions.

Re: Claim 7, wherein the pin (66) has an axis of rotation and rotation of the pin (66) around that axis moves the pin between the locked position (Fig. 3) and the free position (39, 40 into the formations of 70, allowing the removal of both 38 and 66) and one end of the pin along the axis rests on a part of the first or the second.

Re: Claim 8, wherein upon rotating the locking pin (66) into the locked position (fig 3) to interlock with the retaining element (38), the engagement between the locking pin (66) and the retaining element (38) prevents (a) withdrawal of the locking pin (66) from the aligned passages and (b) withdrawal of the locking pin (66) away from the retaining element (38).

Re: Claim 9, wherein the complimentary formations (70) include the land areas that are substantially flat (70).

Re: Claim 10, wherein the complimentary formations (70) include land areas that are substantially concave (adjacent flat part of 70).

Re: Claim 11, wherein the complimentary formations (70) form a slot helical corkscrew (70 is a helical slot around the 66) about the pin (66) so that rotation (see col. 6 lines 3-9) of the pin from the free position (39, 40 into the formations of 70, allowing the removal of both 38 and 66) to the locked position (fig. 3) in one direction draws the pin further into the aligned passages (the pin is brought upwards to a locked position, further into the passage), and upon rotation of the pin in the opposite direction from the locked position to the free position drives the pin out of the aligned passages (once in the free position, the pin is free to be removed from the components with the retaining member).

Re: Claim 12, wherein the pin (66) has therein an insertion recess (70) extending, longitudinally relative to the pin (66) to accommodate the retaining element (via 39, 40) and to

permit insertion of the pin (66) into the aligned passages when the insertion recess (70) is aligned with the retaining element (via 39, 40, the pin and retaining element are free to be inserted into the aligned passages).

Re: Claim 13, wherein the insertion recess (70) does not extend along an entire longitudinal length of the pin (66).

Re: Claim 19, wherein at least part (39, 40) of said retaining element is resiliently movable under a force exerted by the pin (60) when the pin is rotated from said free position to said locked position (the detents 39, 40 move into 70 as the pin is rotated from a free to locked position).

Re: Claim 20, said part (39, 40) of the retaining element is resilient and allows said resilient movement (39 and 40 resiliently move against the pin), while urging said part against the pin (660.

Re: Claim 31, wherein the first (30) and second (42) components are machinery components, the first component being a wear-component configured to wear with use, and the second component is configured to support the first component.

Re: Claim 32, wherein the first component (30) and second (42) component are components of earth moving equipment.

Re: Claim 33, wherein the first component (30) and second (42) component are a tooth and an adaptor, respectively, of earth moving equipment, the adaptor being configured to mount the tooth to an earth moving bucket.

Re: Claim 34, wherein the first component (30) and second (42) component are a shroud and adaptor, respectively, of earth moving equipment, the adaptor being configured to mount the shroud to an earth moving bucket.

Re: Claim 35, wherein the first component (30) is one of a tooth and a shroud, and the second (42) component is a lip of an earth moving bucket.

Re: Claim 36, wherein the pin (66) includes a non-circular formation at an end of the pin for engagement with a rotatable tool to effect rotation of the pin between the free and locked positions (see col. 6, lines 2-9).

Re: Claim 37, wherein at one end, the pin (66) has a cavity therein (see col. 6, lines 2-9), and an aperture extending from the end to communicate with the cavity and to permit insertion of a pin-removal tool (80) into the cavity to withdraw the pin (66) from said aligned passages by engagement of the pin-removal tool (80) with the cavity (see col. 6, lines 2-9).

Re: Claim 38, further comprising a cap (64, 65) releasably engageable with said end of the pin (66).

As for claim 39, Pippins teaches of a method of releasably interlocking a first component (20) and a second (32) component, wherein the first component defines a first passage and the second component defines a second passage, the method including the steps of:

connecting the first component (20) to the second component (32) so that the first and second passages are aligned with each other;

providing in one of said components a retaining element (38);

inserting a pin (66), which has a pair of spaced walls (around 70) at least partly defining a circumferentially extending slot (70) for engagement with said retaining element (38 via 39, 40)

into the aligned passages so that, when so inserted, the pin is in a free position (when the pin is inserted it is initially placed in a free position, where the detents are in the pin) in which it is free to be selectively withdrawn from the aligned passages;

rotating the pin (see col. 6, line 5) relative to the components, from the free position to a locked position (fig. 3) so that said retaining element (38) interlocks (via 39, 40) with said slot (70) defined by the pair of spaced walls to thereby prevent withdrawal of the pin from the aligned passages and hence to prevent separation of the components.

Re: Claim 40, wherein the step of connecting the first component to the second component includes connecting the components such that they can substantially only be separated by effecting relative movement of the components in opposite disengagement directions, and the step of inserting the pin includes inserting the pin such that, when the pin extends from the first passage into the second passage, the pin prevents said relative movement in said disengagement directions.

Re: Claim 41, wherein said engaging formation comprises a ball (39, 40) and said resilient element comprises a coil spring (63).

Re: Claim 42, wherein said engaging formation comprises a ball (39, 40).

Re: Claim 43, wherein said resilient element comprises a coil spring (63).

Allowable Subject Matter

[5] Claims 14-18, 21-26, and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As for Claims 14, the prior art, incorporating other corresponding limitations as set forth above, does not teach of a withdrawal recess which is displaced longitudinally on a circumference of the pin and apart from the insertion recess, and which withdrawal recess permits withdrawal of the pin from the aligned passages, when the withdrawal recess is aligned with the retaining element. Claims 15 and 17 are dependent upon claim 14.

As for claims 16 and 18, the prior art does not teach of on the components being closed at one end, such that the aligned passages are closed at one end (claim 16), as well as wherein the passage of one of said components includes two coaxial spaced-apart sub-passages and the passage of the other component is disposed between, and aligned with, said sub-passages when the components are connected to each other, to form said aligned passages (claim 18).

As for claims 16 and 18, the prior art does not teach of the resilient element including an elastomeric support and an engagement element, and wherein the engagement element of the retaining element of the retaining element abuts the elastomeric support. Claims 22-26 and 29-30 are dependent upon claim 21.

Response to Arguments

[6] Applicant's arguments filed 6/19/2008 regarding rejections under 35 U.S.C. 102 have been fully considered but they are not persuasive. Basically, the applicant argues that the prior art of Pippins does not teach or disclose of a "locking" pin with a "locked" configuration that prevents withdrawal of the locking pin from the aligned passages and separation of the components. The examiner disagrees. The examiner has treated the above recitation as a functional recitation, the prior art of Pippins only needing to be capable of performing the functional nature of the claimed subject matter to be applicable in the instant case. It has been

held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

More specifically, as articulated above, when the pin (66) is in a locked position, as shown in fig. 3 of Pippins, the pin is in a configuration that can be interpreted as preventing withdrawal of the pin from the aligned passages, as well as preventing separation of the components. Left alone, the pin adjacent the retaining member and components provides an environment within the scope of a configuration in which its withdrawal or separation of components is prevented. Applicant is reminded that claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson, 181 USPQ 641 (CCPA 1974)*, and that things clearly shown in reference patent drawings qualify as prior art features, even though unexplained by the specification. *In re Mraz, 173 USPQ 25 (CCPA 1972)*.

Consequently, once a user decides to separate the two components, the pin is then moved from its locked position to its free position with both 38 and 40 fitting into 70, thereby allowing the user to separate the pin and the retaining element from the first and second components separating the two {components}. Just because a user may be able to withdrawal the pin from the retaining element while it is in the configuration does not mean that {the structure of fig. 3} is not to some degree preventing withdrawal of the locking pin from the passages and separation of the components in the first place. For proper and effective removal of the pin from the retaining element and the subsequent separation of the components, a user is needed to initiate such a withdrawal/separation. Further, it is unclear as to why the user would want to remove the pin from the retaining element and components, solely while in the locked position, as the

connection between components would be useless without the pin being used properly (i.e. removed in conjunction with the retaining element). Preventing removal is of a different functional nature then a configuration in which it may be impossible to remove.

The examiner recommends that the applicant attempt to claim the structural features of the pin and/or retaining element that provide for such "preventing withdrawal of the locking pin from the aligned passages" (such as that of the objected to depending claims) as to help differentiate the functional language of the claim from the prior art of Pippins.

Conclusion

[7] **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

[8] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached at (571) 272-6987. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Reese

/D. C. R./
Examiner, Art Unit 3677

/Victor Batson/
Supervisory Patent Examiner, Art Unit 3677